

CLAIMS

1. An absorbent article comprising:
a topsheet;
an absorbent core material; and
an acquisition distribution layer between said topsheet and said absorbent core
5 material, wherein said acquisition distribution layer is a three dimensional apertured
film having a female side and male side, wherein said acquisition distribution layer
defines a void volume space.

2. The absorbent article according to claim 1 wherein:
said acquisition distribution layer has at least one raised ridge extending
10 towards said topsheet from said female side of said acquisition distribution layer.

3. The absorbent article according to claim 2 wherein:
said raised ridge runs in a longitudinal direction of the absorbent article for
directing unabsorbed fluid to flow primarily in a desired direction with respect to the
absorbent article for reducing side leakage from said absorbent article.

15 4. The absorbent article according to claim 1 wherein:
said acquisition distribution layer is a multi-layer film having a first three
dimensional apertured film adjacent a second three dimensional apertured film;
said second three dimensional apertured film is affixed to a female side of said
first three dimensional apertured film wherein said first three dimensional apertured
20 film has at least one raised ridge; and

a void area is created between said second three dimensional apertured film
and said first three dimensional apertured film for containing unabsorbed fluid and
substantially preventing contact of the fluid with the topsheet.

5. The absorbent article according to claim 1 wherein:

said acquisition distribution layer is a multi-layer film having a first three dimensional apertured film adjacent a second three dimensional apertured film;

said second three dimensional apertured film is affixed to a female side of said first three dimensional apertured film; and

5 a void area is created between said second three dimensional apertured film and said first three dimensional apertured film for containing unabsorbed fluid and substantially preventing contact of the fluid with the topsheet.

6. The absorbent article according to claim 1 wherein:
said topsheet is a vacuum formed film layer.

10 7. The absorbent article according to claim 1 wherein:
said acquisition distribution layer has a plurality of cells wherein adjacent cells each have a hole that allows insult fluids to be rapidly acquired through the acquisition distribution layer.

8. The absorbent article according to claim 7 wherein:
15 said plurality of cells have a mesh count of between approximately 2 and 25.

9. The absorbent article according to claim 7 wherein:
said plurality of cells have a mesh count of between approximately 4 and 15.

10. The absorbent article according to claim 7 wherein:
said plurality of cells have a mesh count of approximately 8.

20 11. The absorbent article according to claim 7 wherein:
said cells have a shape selected from a group comprising hexagonal, circular, oval, elliptical, or polygonal.

12. The absorbent article according to claim 7 wherein:

said plurality of cells form a cell pattern that is a combination of at least two shapes selected from a group comprising hexagonal, circular, oval, elliptical, or polygonal.

13. The absorbent article according to claim 1 wherein:

5 said void volume space is a total void volume space of the acquisition distribution layer, wherein said total void volume space is greater than 500 cm³.

14. The absorbent article according to claim 1 wherein:

 said void volume space is a total void volume space of the acquisition distribution layer, wherein said total void volume space is greater than 750 cm³.

10 15. The absorbent article according to claim 1 wherein:

 said void volume space is a total void volume space of the acquisition distribution layer, wherein said total void volume space is greater than 1000 cm³.

16. The absorbent article according to claim 1 wherein:

15 said void volume space is on the female side of the acquisition distribution layer to facilitate spill-over of unabsorbed fluid.

17. The absorbent article according to claim 16 wherein:

 said void volume space on said female side is greater than 500 cm³.

18. The absorbent article according to claim 16 wherein:

 said void volume space on said female side is greater than 750 cm³.

20 19. The absorbent article according to claim 16 wherein:

 said void volume space on said female side is greater than 1000 cm³.

20. The absorbent article according to claim 1 wherein:
said void volume space is on the male side of the acquisition distribution layer
to facilitate spill-under of unabsorbed fluid.

5 21. The absorbent article according to claim 20 wherein:
said void volume space on said male side is greater than 500 cm³.

22. The absorbent article according to claim 20 wherein:
said void volume space on said male side is greater than 600 cm³.

23. The absorbent article according to claim 20 wherein:
said void volume space on said male side is greater than 750 cm³.

10 24. An absorbent article comprising:
a first three dimensional apertured film having a female side and a male side,
wherein said first three dimensional apertured film defines a void volume space;
a second three dimensional apertured film that is affixed to said female side
of said first three dimensional apertured film;
15 a void area between said second three dimensional apertured film and said
first three dimensional apertured film for containing unabsorbed fluid; and
an absorbent core material adjacent said male side of said first three
dimensional apertured film.

20 25. The absorbent article according to claim 24 further comprising:
a topsheet adjacent a female side of said second three dimensional apertured
film.

26. The absorbent article according to claim 24 wherein:
a total void volume space is defined by said void volume space of the first and
second three dimensional apertured film layers, wherein said total void volume space

in greater than 500 cm³.

27. The absorbent article according to claim 24 wherein:

a total void volume space is defined by said void volume space of the first and second three dimensional apertured film layers, wherein said total void volume space
5 in greater than 750 cm³.

28. The absorbent article according to claim 24 wherein:

a total void volume space is defined by said void volume space of the first and second three dimensional apertured film layers, wherein said total void volume space
in greater than 1000 cm³.

10 29. The absorbent article according to claim 24 wherein:

said void volume space is on the female side of the first three dimensional apertured film to facilitate spill-over of unabsorbed fluid.

30. The absorbent article according to claim 26 wherein:

said void volume space on said female side is greater than 750 cm³.

15 31. The absorbent article according to claim 26 wherein:

said void volume space on said female side is greater than 1000 cm³.

32. The absorbent article according to claim 26 wherein:

said void volume space on said female side is greater than 1250 cm³.

33. The absorbent article according to claim 24 wherein:

20 said void volume space is on the male side of the first three dimensional apertured film to facilitate spill-under of unabsorbed fluid.

34. The absorbent article according to claim 30 wherein:

said void volume space on said male side is greater than 500 cm³.

35. The absorbent article according to claim 30 wherein:

said void volume space on said male side is greater than 600 cm³.

36. The absorbent article according to claim 30 wherein:

said void volume space on said male side is greater than 750 cm³.

37. A method of avoiding a wetness sensation of a topsheet in an absorbent article comprising:

passing fluid through an apertured acquisition distribution layer to an area proximate a core material; and

redirecting unabsorbed fluids to an area of non-saturated core material via void spaces defined by a male side of said acquisition distribution layer material.

38. The method according to claim 37 wherein:

said step of redirecting unabsorbed fluids includes providing raised ridges that define channels for directing fluids in a desired direction of the apertured acquisition distribution layer.

39. The method according to claim 37 wherein:

said step of passing fluid through an apertured acquisition distribution layer comprises passing fluid through a first three dimensional apertured film and second three dimensional apertured film.

40. A method of avoiding a wetness sensation of a topsheet in an absorbent article comprising:

providing an apertured acquisition distribution layer defining a plurality of buckets that communicate with a core material at an apex opening of said plurality of buckets;

allowing unabsorbed fluids to fill one of said plurality of buckets when an area of core material beneath said one of said buckets becomes saturated; and

allowing said unabsorbed fluids to spill over from said one of said buckets to an adjacent bucket so that said unabsorbed fluid may contact unsaturated areas of said core material.

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